

REMARKS

With the above amendments, claims 21-22 have been canceled and claims 16-20 and 24 have been amended. Claims 9-15 have been withdrawn from consideration by a prior restriction requirement. Thus, claims 9-24 are pending with claims 16-24 ready for further action on the merits. No new matter has been added by way of the above amendments. Support for the amendments to the claims can be found at page 4, lines 10-11, at page 5, lines 6-14, at page 13, line 11, and at page 21, line 27. Entry of the amendments and reconsideration is respectfully requested in light of the following remarks.

Examiner Interview

Applicants' representative would like to thank the Examiner for taking the time to interview on June 30, 2004. The gist of the interview is as indicated on the Interview Summary form.

Rejections under 35 USC §112, second paragraph

Claims 16-24 are rejected under 35 USC §112, second paragraph as allegedly being indefinite. The Examiner asserts that it is unknown what is meant by "low to medium molecular weight". Applicants have canceled this language so the rejection is moot. Withdrawal of the rejection is warranted and respectfully requested.

Claims 20-22 are rejected because the Examiner asserts that it is unknown how those of skill in the art would choose primer sets. The Examiner asserts that Applicants have not indicated as to which specific primer can be used for amplification of which specific protein. Applicants assert that because the coding sequence regions of the desired proteins are known (as well as the regions to the 5' side and the 3' side of the region that codes for the proteins), one of skill in the art would be able to readily identify what primers can be used for what proteins. Moreover, Applicants have limited the claims to recite specific proteins. Applicants believe that with this explanation, and the above amendments that the rejection has been obviated. Withdrawal of the rejection is warranted and respectfully requested.

Claims 20-22 have been rejected because the Examiner asserts that two primers are needed for PCR. Applicants disagree. Applicants assert that it is well known in the art that amplification can be accomplished with only one primer. However, to expedite prosecution, Applicants have amended claim 20 to recite "and amplified by any two primers that are selected from the group consisting of SEQ ID NO:3 . . .". Applicants believe that with this amendment that the rejection has been obviated. Withdrawal of the rejection is warranted and respectfully requested.

Claim 23 has been rejected for reciting "an active region". Applicants respectfully point out that at page 6, line 5 *et seq.* it is explained what is meant by an "active region". Accordingly, Applicants respectfully submit that this term is neither vague nor indefinite. Withdrawal of the rejection is warranted and respectfully requested.

Rejections under 35 USC §112, first paragraph

Claims 20-22 are also rejected under 35 USC §112, first paragraph as allegedly not being enabled. Claims 16, 18, 20-24 are rejected under 35 USC §112, first paragraph as allegedly not being enabled or having adequate structured description in the specification. Applicants have amended claim 20 to recite particular desired proteins as well as a particular virus particle protein (*i.e.*, gp64). Applicants believe that with these amendments, one of skill in the art could make and use the invention commensurate in scope with the claimed invention without undue experimentation. Accordingly, Applicants believe that claims 20-22 are fully enabled and that the rejection has been obviated. Withdrawal of the rejection is warranted and respectfully requested.

Rejections under 35 USC §102

Claims 16-17 and 23-24 are rejected under 35 USC §102(b) as being anticipated by Boublik et al. (Biotechnology, 13, pp, 1079-1084, (1995).). The Examiner asserts that the protein fusion that results from plasmid pA_cGST2RGPAC-1 in Figure 1 and the fusion protein in Figure 6 (i.e., gp64-GST) anticipates the instant invention. Applicants respectfully point out that claims 16 and claim 20 have been amended to recite particular desired proteins and a particular virus particle protein. Applicants note that Boublik et al. disclose a gp64-GST fusion protein but does not disclose any of the claimed desired proteins in the currently amended claims. Moreover, Applicants respectfully point out that the gp64-GST protein as disclosed by Boublik et al. does not have a membrane-spanning segment as claimed in the instant claims. Accordingly, Applicants believe that the rejection has been obviated. Withdrawal of the rejection is warranted and respectfully requested.

Rejections under 35 USC §103

Claims 18-22 are rejected under 35 USC §103(a) as being unpatentable over Boublik et al. (Biotechnology, 13, pp. 1079-1084, (1995) in view of the common knowledge in the art of protein biochemistry and molecular biology. Applicants respectfully point out that claims 16 and 20 have been amended to recite particular

desired proteins and a particular virus particle protein (please note that claims 18-19 are dependent from claim 16 either directly or indirectly). The particular desired proteins are neither disclosed nor suggested by Boublik et al. Moreover, as was pointed out above, claim 16 has also been amended to recite wherein said desired protein has a membrane spanning segment, which is neither disclosed nor suggested by Boublik et al. Applicants point out that the only disclosed examples in Boublik et al. contain GST, which do not have any membrane spanning segment. One advantage that the instant invention possesses because of this membrane-spanning segment is that the desired protein does not drop from the particle during purification. This is not the case with the protein disclosed in Boublik et al. Other advantages are described in the written description at page 6, line 5 et seq.

Moreover, regarding claim 20, Applicants respectfully point out that Boublik et al. fail to disclose or suggest the particular desired proteins. Please see *In re Baird*, 29 USPQ2d 1550 (Fed. Cir. 1994) regarding using a genus to render obvious a species. In *Baird*, the court found that a genus could not render obvious a species. Likewise, any generic disclosure in Boublik et al. cannot render obvious the species as claimed in claim 20 because Boublik et al. fail to name those species.

Accordingly, Applicants assert that the Examiner has failed to make out a *prima facie* case of obviousness with regard to the 35

USC §103(a) rejection over Boublik et al. Three criteria must be met to make out a *prima facie* case of obviousness.

- 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
- 2) There must be a reasonable expectation of success.
- 3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

See MPEP §2142 and *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991). In particular, the Examiner has failed to meet the third element to make a *prima facie* obviousness rejection. As was mentioned above, Boublik et al. fail to disclose or suggest a membrane-spanning segment in their fusion protein as appears in claim 16 and do not disclose or suggest the desired protein species as disclosed in claim 20.

Even if a proper *prima facie* obviousness rejection were made (which Applicants do not concede), the instant invention by having that membrane spanning segment possesses advantages that are not present with fusion proteins that do not have membrane spanning segments. Accordingly, Applicants believe that the rejection has been obviated. Withdrawal of the rejection is warranted and respectfully requested.

With the above remarks and amendments, it is believed that the claims, as they now stand, define patentable subject matter such that passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

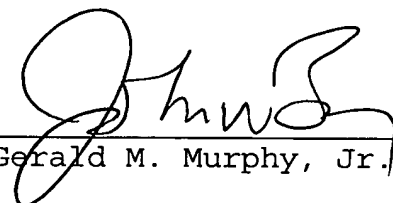
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact T. Benjamin Schroeder (Reg. No. 50,990) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for one (1) month extension of time for filing a response in connection with the present application. The required fee of \$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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